

## ON SOME NEW OR RARE LEPIDOPTERA OF THE OLD-WORLD REGIONS.

By THE HON. WALTER ROTHSCHILD.

### NYMPHALIDAE.

#### 1. *Charaxes latona diana* subsp. nov.

*♂*. *Upperside*: forewing, the black colour more extended than in *cimon*, to which form of *latona* the present subspecies comes nearest: the black spots between apical black area and black bar at apex of cell included into the black area; hinder margin black to near middle. Hindwing, marginal black area also wider than in *cimon*, without submarginal spots, except one near anal angle; median black bars between costal margin and apex of cell heavy, interspace between them and black marginal area lighter, ground-colour at basal side of the bars rather darker, than rest of the brown area of the wing.

*Underside* of both wings darker than in *cimon*, but median line of black bars bordered with white outwardly, and ground-colour just outside these bars pinkish white between vein 5 and hindmargin of forewing, and between veins 8 and 5 of hindwing.

*♀*. The markings in the same position as in the other forms of *latona*, but the black colour very heavy, and the yellow colour partly replaced by white.

*Upperside*: forewing, basal region dark russet-brown: the five black bars in middle of wing very heavy, the two upper ones forming a large black patch; the two series of markings in outer half of wing, separated from one another by a black zigzag line, are white in *diana*, not yellow as in the other forms of *latona*; submarginal black spots much larger than in *cimon*, merged together with the black outer margin of the wing, except the last, which is partly separated from the marginal border by a tawny line.

Hindwing russet-tawny; postcostal black median bars as in *♂*, ground-colour at their basal side dark brown, three white or nearly white patches at their outer side; a discal line of six or seven black lunules crosses the wing about midway between cell and black submarginal patches; interspaces between the lunules and submarginal patches tawny, except that between veins 6 and 7; first black lunule in one of the two specimens not separated from the black submarginal patch. Submarginal patches much larger than in all other *latona* forms, with minute white centres, all touching each other, except the last two; interspaces between these patches and the black marginal border bright tawny ochraceous. Tails broad.

*Underside* differs from that of *cimon* *♀* in the ground-colour within cell of forewing, outside the median black line of both wings, and between the two sub-basal series of bars of hindwing, being white; the middle of the forewing between discal black line and cell also shaded with white; submarginal spots of forewing white, brown at their basal side.

*Hab.* New Hanover, Bismarck Archipelago, 1 *♂*, 2 *♀♀* (Capt. H. C. Webster, February and March 1897).

2. *Charaxes latona leto* subsp. nov.

♂. Agrees with *Ch. latona gigantea* Hagen, *Jahrb. Nass. Ver. Nat.* 1897, p. 94, n. 161 (Simbang), except in the following particulars:—

*Upperside*: forewing has a series of brown lunules standing  $2\frac{1}{2}$  mm. from the black border of the wing; these lunules are extremely faint in *gigantea* and only 1 mm. distant from the black border, the latter being somewhat broader in *gigantea* than in *leto*; the lunule between veins 6 and 7 twice as wide in *leto*, the tawny orange spot between it and border of wing larger; there is no orange-tawny spot between veins 7 and 8. On hindwing the submarginal black patches are smaller, the orange-tawny interspaces between them and border of wing larger.

*Underside*: hindwing with a greyish plumbeous metallic gloss, except outer margin and a narrow band in outer half of wing; no small yellowish buff patches at the outer side of the black discal bars, but on forewing the ground-colour there paler than elsewhere on wings.

*Hab.* Goodenough I., 1 ♂, *type* (A. S. Meek, December 1896); Fergusson I., 1 ♂ (A. S. Meek, between September and December 1894).

3. *Charaxes eupalus dilutus* subsp. nov.

♀. The greenish apical area of the forewing above much reduced, the white colour extending 10 mm. beyond apex of cell, while in the *females* from West Africa the interspace between apex of cell and green apical area is only  $2\frac{1}{2}$  mm.; no fuscous dot at apex of cell. Hindwing much paler than in West African *eupalus*, margin as pale as disc; submarginal spots very small, only four in number, the two anterior ones of *eupalus* being absent in *dilutus*.

On underside there is a broad pale bar in cell of forewing.

*Hab.* Zomba, Nyassaland, December 1895 (Dr. Percy Rendall).

4. *Euphaedra eleus orientalis* subsp. nov.

♂. *Upperside*: forewing, subapical band half as wide again as in the common West African form; the black area more extended, its inner edge crossing median nervure at origin of vein 3 and being 10 mm. distant from outer margin at vein 2; two black dots in cell. Hindwing, submarginal blue and white dots smaller than in *eleus*.

*Underside*: forewing, subapical band as broad as above, an interrupted black line at apex of cell, and three black dots in cell. Hindwing with two black dots in cell and three white patches on disc; submarginal spots smaller than in *eleus*.

*Hab.* Mikindani, German East Africa, between January and May 1897, 1 ♂ (Reimer).

## LYCAENIDAE.

5. *Liphyra brassolis major* subsp. nov.

♀. A third larger than *brassolis* and *robustus*. Outer margin of forewing slightly sinuate below apex, hence apical angle acute; marginal black band of forewing between veins 2 and 4 much narrower (comparatively) than in *robustus*; yellow postdiscal spots between these veins 7 mm. long, rounded outwardly, almost straight or somewhat convex basally; black area in cell not quite so extended basally as in *robustus*; black border of wing running down halfway to base at hinder margin.

On hindwing the discal black spots are very heavy in *type*-specimen, the anterior one joined to the second by means of some black scales; in the second specimen these spots are not larger than in *brassolis brassolis*.

*Underside*: forewing, median black bandlike patch sharply defined, veins traversing it not pale; patch is 10 mm. wide at the subcostal nervure; its outer edge is irregularly indented between subcostal nervure and vein 4; the portion between veins 3 and 4 is nearly 1 mm. longer than that behind it; inner edge of patch forms a rounded angle, the point of which lies upon the median nervure. Hindwing, disc and outer-marginal region with very few brown scales; brown band at the basal side of the submetallic grey area at abdominal margin narrower than in the other forms of *L. brassolis*; no black spot at the apex of the cell.

Forewing: length 46 mm., breadth 28 mm.

*Hab.* North Queensland, 2 ♀♀; *type*: Cedar Bay, thirty miles south of Cooktown (A. S. Meek).

## PIERIDAE.

### 6. *Delias aruna rona* subsp. nov.

♂. Black border to wings above slightly narrower than in *aruna* from the mainland of New Guinea; the red discal area of the underside of the hindwing only half the size, extending from apex of cell to base of vein 7, and being much dusted over with black scales.

*Hab.* Ron L. Geelvink Bay, 1 ♂ (W. Doherty, July 1897).

I shall not be surprised if there turn up some day in collections from the region between Dutch and British New Guinea specimens of *aruna* which entirely link *aruna* together with *inferna*.

### 7. *Delias madetes* G. & S.

Messrs. Godman & Salvin described both sexes of this species from New Ireland (now "Neu Mecklenburg") and figured (*P.Z.S.* 1879, t. 15) the upper and underside of the *male*. In the explanation of the plate the underside is erroneously said to be that of the *female*; this misprint would have been found out by Mitis, no doubt, if this monographer of the genus had compared Messrs. Godman & Salvin's description of the two sexes, in which it is stated that the ♀ has on the forewing below "no yellowish spot spreading from the inner margin over the median branches." The absence of such a light patch from the underside of the forewing of *honrathi* Mitis ♀ from New Britain (= Neu Pommern) was, however, the chief character by which Mitis distinguished his *honrathi* from *madetes* ♀; this difference does not exist.

I have lately received 2 ♂♂, 1 ♀, of *D. madetes* from Neu Hannover, collected by Captain H. C. Webster in February and March 1897, and have also 1 ♂ from New Britain, obtained by the same collector on a previous expedition, which, together with the figures given by Godman & Salvin and Mitis, enable me to point out the following slight differences between the two forms of *madetes*:

♂. In *D. madetes honrathi* from New Britain the black apical area of the forewing above and the black border to the hindwing are wider than in *madetes madetes*; in the latter the colour of hindwing passes into sulphur-yellow near the outer edge of the wing, while in *honrathi* the sulphur-yellow colour is found only

at the abdominal margin. On the underside the yellow spots are deeper in tint in *honrathi*, and the black colour of the hindwing is decidedly more extended.

♀. The submarginal spots of the upperside are smaller in *honrathi* than in the first-described form of the species; on the underside the spots of the forewing are less yellow in *honrathi*, while the black colour of the hindwing is more developed.

## SATURNIIDAE.

### 8. *Coscinocera hercules*.

This insect, of which I have a series of eleven specimens from Queensland, New Guinea, and New Ireland, has developed into three easily recognisable races, which are distinguished from one another as follows:—

*a. C. hercules omphale* Butler, *Tr. E. Soc. Lond.* p. 7 (1879) (N. Ireland).

♂. Wings above much more reddish tawny than in the other two forms: white band in basal half of wings not bordered black outwardly; postmedian white line not very clearly defined, of nearly the same width (2 mm.) throughout, straight between the veins, its inner border darker than the ground-colour of the wing, but not so black as in the races from New Guinea and Queensland. The eye-spot of the forewing is irregularly elliptical, not pear-shaped, and has a triangular hyaline centre the longer diameter of which (7 mm.) is parallel to the postmedian band, while the longer diameter of this hyaline spot is parallel to the veins in the other races; the hyaline spot in *omphale* is encircled with white, upon which follows a broad ochraceous ring (5 to 7 mm.), which is much more yellow than the ground-colour of the wing and has a black outer border. The distance between eye-spot and postdiscal band is about 5 mm. The eye-spot of the hindwing is almost circular (width 13 mm.); the longer diameter of the hyaline centre is again parallel to the postdiscal band; colour the same as on forewing. On the underside the size of the eye-spots is especially remarkable, the ochraceous ring round the hyaline centre being 5 mm. wide midway between the veins.

♀. Unknown.

*Hab.* New Ireland (= Neu Mecklenburg), 1 ♂.

*b. C. hercules eurystheus* subsp. nov.

*Attacus hercules*, Oberthür (*nec* Miskin), *Et. d'Ent.* XIX. p. 34. t. 1. f. 1 (♂) (1894) (Ansus, Jobi I.).

♂. Outer band of forewing much less white than in *hercules hercules*, consisting of rather obscure whitish lunules, which are on the forewing widely separate from one another and are inwardly bordered with brownish black. Basal band outwardly with a brownish black border: the anterior luniform portion of this band stands at a distance of 13 mm. from the black outer ring of the eye-spot. The eye-spots both of fore- and hindwing are very small, strongly triangular; that of the forewing reaches the postdiscal band, its clayish ochreous ring less bright than in *omphale*, in *type* from Dorey 2 mm. wide basally, in specimen from German New Guinea 4 mm. Eye-spot of hindwing with longer diameter of hyaline centre at an angle of about 45° to postdiscal band; hyaline spot small, diameters 2 and 4 mm. respectively. Eye-spots on underside with the hyaline centre as above, but

ochreous ring of nearly the same reddish brown colour as the inner line of the postdiscal bands, and narrower than above. The *type*-specimen is much darker above than *omphale*, while the specimen from German New Guinea approaches *omphale* in the tint of the ground-colour.

♀. Differs from *hercules hercules* in the eye-spots being smaller, the dusting of grey and reddish brown scales outside the postdiscal band more extended, and in the cellular portion of the white line of the basal band of the forewing being 8 or 9 mm. distant from the black ring of the eye-spot.

In these characters my three *females* from Waigen, Mefor, and Fergusson I. agree, while they differ *inter se* in the width of the white line of the postdiscal band, in the size of the hyaline spots, and the tint of the ground-colour of the upperside. The hyaline spots are in the Waigen ♀ as large as in my Queenslandian specimens.

*Hab.* Dorey, 1 ♂, *type* (W. Doherty, June 1897); Snér, Mefor I., 1 ♀ (W. Doherty, May and June 1897); Waigen, 1 ♀; Fergusson I., 1 ♀ (A. S. Meek December 1894); Constantinhafen, German New Guinea, 1 ♂.

*c. C. hercules hercules* Miskin, *Proc. Ent. Soc. Lond.* p. 26 (1875) (Cape York).

♂. As *curystheus*, but eye-spots much larger; hyaline centres wider, that of forewing measuring  $7\frac{1}{2}$  by 12 mm.; white line of cellular curved portion of basal band of forewing 10 mm. distant from the black ring of the eye-spot; clayish ochraceous outer-marginal region of forewing wider; white line of postdiscal band more distinct. Body above paler.

♀. Anterior portion of basal band of forewing above only 4 or 5 mm. distant from the black ring of the eye-spot, while in *curystheus* the distance is 8 or 9 mm.; outer-marginal region of forewing above for a greater distance without grey and reddish brown scales. Body paler.

Ground-colour of wings above varies from walnut-brown to raw sienna-colour, with the basal and outer-marginal regions lighter.

*Hab.* North Queensland: Cairns and Cooktown, 1 ♂, 4 ♀ ♀.

### 9. *Nudaurelia ansorgei* sp. nov.

♂. *Upperside*: forewings, chestnut-brown, speckled all over with black scales, giving a greyish tint to the wings. About one-fourth from the base the wing is crossed by a black line, strongly angulated between veins 1 and 2: this line is edged outwardly with white. At the apex of cell is a round eye, consisting of a vitreous dot surrounded by a broad ring of tawny ochraceous and enclosed by a very narrow line of dull whitish pink. Halfway between this eye and the outer margin the wings are crossed by a black transverse line, curved near costa, margined on the inner side with a pinkish white band, which colour runs into the wing towards the eye in the form of scattered light scales.

Hindwings, basal two-thirds brownish pink, crossed between middle and base by an indistinct black band. In the centre of the wings is a large eye, having a vitreous centre, outside this a dark yellow broad ring, then a narrower black one, followed by a dark red one, the whole enclosed by an outside whitish pink ring. A little beyond the eye the wings are crossed by a broad black sinuous band, edged on the inner side with a narrow grey line. Outer third of wings chestnut, freckled with black like forewings.

*Underside*: antemedian bands absent; eye-spot of forewing as large as above, but with a black ring between the tawny ochraceous central ring and outer whitish pink one. Hindwing from postdiscal black line towards base pinkish grey; eye-spot reduced to a vitreous dot surrounded by a broad tawny ochraceous ring.

Antennae dark brown; basal part of stalk yellow. Head, thorax, and abdomen tawny ochraceous.

Size as *N. nictitans* Fabricius.

Distinguished from the allied species especially by the postdiscal band of the forewing being curved anteriorly, the antemedian band being angulate, and the black outer band of the hindwing being  $2\frac{1}{2}$  mm. wide.

*Hab.* Masindi, Unyoro, April 30th, 1897, 1 ♂ (Dr. I. W. Ansorge). Named in honour of the collector, in whose collection the specimen is.

#### 10. *Pseudaphelia ansorgei* sp. nov.

The two spots at the end of the cell of both wings of *apollinaris* are absent in *ansorgei*, being replaced on both wings by a black dot just behind the origin of vein 5, which has, however, on the underside a yellow centre; the black patches in the apex of the forewing between vein 6 and costal margin are heavier above than in *apollinaris*; the yellow marginal spots are very small, being reduced to minute dots at the end of the veins, and they are not bordered by fuscous, the creamy colour of the wing extending to the very edge of the wings (except apex of forewing); fringe fuscous, that of hinder margin of forewing from base to midway between veins 2 and 3, and fringe of hinder margin of hindwing from base to postdiscal lunate line creamy. Postdiscal line of hindwing closer to cell than to outer margin of wing.

*Hab.* Masindi, Unyoro, April 15th, 1897 (Dr. I. W. Ansorge, in whose collection the specimen is).

### AGANAIDAE.

#### 11. *Asota orbona ocellata* subsp. nov.

♂. *Upperside*: pale orange. Forewing with the two light-coloured patches almost white; the outer patch kidney-shaped, margined with brown; this brown edge very narrow at basal side; subbasal patch rather smaller than in most specimens of the other forms of *orbona*, edged with brown outwardly; six basal black dots. In *type* fringe of both wings orange, in other specimens fringe of entire outer margin of forewing and of apex of hindwing brown; sometimes there are brown streaks near the light patches of the forewing and near the apex behind the costal margin.

On *underside* there is on both wings a bluish black spot near middle of costal margin, also some bluish black scales at costal margin of forewing near apex, or a brown streak extends down the costal margin from near apex of wing to the costal bluish black spot.

♀. Uniformly pale orange; creamy white patches of forewing as in ♂; no brown streaks; fringe pale orange; costal bluish black spots of underside smaller than in ♂.

*Hab.* Woodlark Island, March and April 1897 (A. S. Meek), a long series.

## GEOMETRIDAE.

12. *Presos angelus* sp. nov.

♂ ♀. *Upperside*: forewing as in *mariana* White, which I have from Queensland and British New Guinea, but the median white band much reduced, consisting of a patch in the cell, a triangular spot between veins 2 and 3, and a small spot behind vein 2, all much shaded at the edges with pale slate-colour; costal margin in front of band and two minute spots just beyond apex of cell pale slate-colour: a series of four small spots midway between cell and apex of wing, pale slaty, centred with white; the indistinct pale line near hinder angle in *mariana* replaced here by two slaty spots centred with white; a submarginal series of seven small slaty spots with white centres: an oblique indistinct slaty line at basal fourth as in *mariana*.

Hindwing with a large white median area, extending from abdominal margin, where it is 16 mm. wide, to a little beyond vein 7, at median nervure only 4 mm. distant from base, its inner edge nearly straight, somewhat oblique; shaded with slate-colour at the outer edge, especially in ♂, including at the end of the cell a black spot which is joined to black outer area of the wing. The latter contains two series of yellow spots: the inner series consists of four spots, there being no spots between veins 7 and 8, 4 and 5—the first spot is minute, the last linear; the outer series consists of six spots, of which the fourth is the largest, but is much smaller than the respective spot in *mariana*: near the last spot stands a minute dot.

On the underside the markings of the forewing are more distinctly white: the median band and the two slaty spots at the outer side of the discocellulars include between themselves a black patch; on hindwing the yellow spots of the inner series are in ♀ partly joined to those of the outer series.

Body as in *mariana*, also size, but first abdominal segment slate-colour.

*Hab.* Ron I., Geelvink Bay, July 1897, 1 ♂, 1 ♀ (W. Doherty).

13. *Callhistia grandis kaporana* subsp. nov.

♂. Differs from *C. grandis grandis* in the band of the forewing being much narrower, measuring at the costal margin only 3 mm. and at hinder margin 5 mm. The inner edge of the band is almost straight, crossing the median vein just outside the origin of vein 2; the outer edge is nearly straight from costal margin to inter-nervular fold between veins 2 and 3, where the band is 9 mm. wide, and then turns at a sharp angle to the hinder margin of the wing; the tip of the angle is 3½ mm. distant from the outer margin of the wing. The band of the hindwing is slightly narrower than in *grandis*, its outer edge being at vein 4 only 1½ mm. distant from the apex of the cell; the first partition between veins 7 and 8 is sharply cut off by vein 8; on underside the band extends beyond vein 8.

*Hab.* Kapaur, Dutch S.W. New Guinea, January 1897, 1 ♂ (W. Doherty), at a low elevation.

NOTE.—*Milionia regina* Druce, *Ann. Mag. N. H.* (7). I. p. 149 (1898), from Woodlark I., is the same as *Milionia rawakensis woodlarkiana* Rothschild, Nov. Zool. 1896. p. 328. from Woodlark I. Mr. Druce's specimens as well as mine were from collections made by Mr. A. S. Meek on Woodlark.

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